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ABSTRACT

This issue (v14 n1) of the University of Illinois' "On Research and Leadership Update" contains seven articles. The first, "Community College and Beyond: A National Evaluation of Tech Prep," by Debra Bragg, discusses results of the author's study of student experiences and outcomes in eight local tech-prep consortia in the U.S. "Student Outcomes Assessment in Tech Prep," by Elisabeth Barnett, stresses the need for development of more accurate assessment methodologies for tech prep outcomes. "Considerations in Working with the Dual Credit Student: Social and Legal Issues," by George Johnston and Sharon Kristovich, examines and recommends ways to deal with legal issues involving students under 16 at community colleges. "The Illinois Partnership Academy: A Benefit for All," by Linda Denk, describes the Hospitality and Tourism Academy (HTA) program at Springfield High, Illinois. HTA is offered as a school-within-a-school tech prep program. The author argues that these types of programs increase student retention and college attendance. "Top 10: The Most Useful Tech Prep Related Web Resources," by JoHyun Kim, includes annotated citations and Web addresses for sites the author finds to be useful and authoritative. "A Position Statement Regarding Reauthorization of the Carl D. Perkins Act for Tech Prep," by Dick Arndt, argues that Tech Prep deserves to be continued as a funded initiative under a reauthorized Perkins Act. Finally, Doug Gardner reviews the book, "The Dual Credit Phenomenon! Challenging Secondary School Students across 50 States." (NB)

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Update on Research and Leadership, 2002

Elisabeth Barnett, Editor

Update on Research and Leadership; v14 n1 Fall 2002

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On Research and Leadership
UPDATE

Vol. 14, No. 1 Fall 2002

Community College and Beyond: Major Results of a National Evaluation of Tech Prep

by Debra D. Bragg

Tech prep has been an important part of the national scene since 1990 when federal legislation was passed to create an educational transition program, based on the work of Dale Parnell, that offers students an educational pathway from high school to college, leading to meaningful technical and professional careers. This model is based on the development of curricula that spans at least the last two years of high school and the first two years of college, resulting in an associate's degree or other credential. Important to these initiatives are elements such as advanced academics and career-technical courses, contextual and applied curriculum, work-based learning, secondary/postsecondary articulation, and career and educational planning.

Beginning in January 1998, I led a team of researchers at the University of Illinois at Urbana-Champaign (UIUC) and University of California, Berkeley in conducting a study examining the experiences and outcomes of over 4,700 students in eight local tech prep consortia in the U.S. The study provided a quantitative and qualitative analysis comparing student educational experiences as participants in tech prep programs, as well as their educational and employment outcomes after high school graduation. Findings are presented for students identified locally as enrollees in tech prep programs, who we refer to as tech prep-participants, as compared to a group of students drawn from the general student population with similar academic performance at high school graduation, referred to as non-participants. The study was funded by the U.S. Department of Education to address fundamental questions about students' involvement in tech prep programs and their educational and employment outcomes after high school. Considering the enduring federal commitment to tech prep implementation beginning with the Tech Prep Education Act of 1990 (Perkins II), it was vitally important to understand the ways these programs are influencing student outcomes.

Few studies have examined how tech prep programs have affected students' further education and work after high school graduation. Recognizing that a key feature of tech prep programs is the articulation of secondary and postsecondary curriculum and preparation for future technical and professional careers, a longitudinal study was needed to follow students over an extended period of time.

Major Results and Implications for Policy and Practice

Highlighted in this article are major results and implications for policy and practice, first discussing student characteristics; moving to secondary education; then transition from high school to college and college enrollment, persistence, and completion; and finally employment post-high school.

Editor's Note:

This issue of UPDATE focuses on Tech Prep and includes articles and resources related to its effective implementation. This issue and back issues of UPDATE can be found on the web at: ***http://occrl.ed.uiuc.edu.***

This Issue Features:

1 Community College and Beyond: A National Evaluation of Tech Prep

4 Student Outcomes Assessment in Tech Prep

7 Considerations in Working with the Dual Credit Student: Social and Legal Issues

9 The Illinois Partnership Academy: A Benefit for All

11 Top 10: The Most Useful Tech Prep Related Web Resources

13 A Position Statement Regarding Reauthorization of the Carl D. Perkins Act for Tech Prep

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Tech Prep Participants Similar to General Student Population

First, students who participate in tech prep programs do not differ substantially on race/ethnicity, income, and parental education from the comparison group of students who represent the general student population that achieved similarly to the tech prep group at high school graduation. However, gender emerged as a variable on which tech prep participants differed from their peers in four consortia, favoring participation by males in all cases. This result was attributable largely to a preponderance of traditionally male-oriented career-technical education (CTE) specializations linked to tech prep. The CTE programs that enrolled males in larger numbers than females are not surprising, and included computer technologies, electronics, manufacturing, engineering, and trade and industrial occupations. Recognizing that federal law requires tech prep programs to provide equal access to all students, including non-traditional enrollments and members of special populations, it is important that local personnel emphasize equitable demographic representation.

Academic Course-Taking Similar to or Exceeding Comparable Students

Secondary curricula and types of tech prep participation varied widely from consortium to consortium, making it difficult to formulate definitive conclusions about particular models or approaches. Acknowledging this, our results support the notion that school and consortium course requirements influence student participation in core academic courses. Consortia that deliberately associate tech prep with college prep requirements in subjects such as math and science have students who engage in math- and science-course taking more intensively and extensively than tech prep consortia that do not. In consortia where the linkages between tech prep requirements and advanced academic requirements do not occur, tech prep students are less likely to progress into more advanced academic curricula. In a related and important finding, a few consortia show that tech prep participants need not be disadvantaged in fulfilling a college prep program of study if participating in both intensive CTE and academic course-taking.

Looking at academic course taking (amount and level) in greater depth, we found the level of math course taking was slightly higher for tech prep-participants than their non-participant peers in four consortia. Students in these consortia also showed group differences in the number of high school math courses taken, with tech prep participants at one site taking significantly more semesters than non-participants.

Group differences were evident in the number of science courses taken in seven of the eight consortia studied, usually favoring the non-participant group. In fact, non-participants exceeded tech prep-participants in the total semesters of science taken in five consortia, except in two sites (one consortium and one high school within a consortium). Most students in both study groups were taking mostly regular science (e.g., biology, chemistry). In a few consortia, tech prep-participants were taking more lower-level science courses than non-participants, but in most consortia the differences between groups was related to differences in the proportion of students taking regular and honors science (such as biology, chemistry and physics courses), all well beyond a basic level.

Career-Technical Education (CTE) Course-Taking Exceeds Comparable Students

CTE course-taking was enhanced by the tech prep model in most sites if judged by the level of secondary enrollment in CTE courses, including articulated CTE courses. Several forms of work-based learning such as co-op and job shadowing were prominent among tech prep participants, suggesting that students who engaged in tech prep were more likely to be involved in intensive learning experiences related to careers, both in the classroom and off campus. Work during high school was prevalent for both groups, suggesting students begin juggling school, work, and personal commitments early in their educational lives. Also, an association was found between tech prep participants and service learning/community service, always favoring non-participants.

Articulated course-taking was substantial for tech prep-participants in five sites, ranging from 65% to 91% for tech prep-participants and 31% to 76% for non-participants. This course-taking occurred most often in CTE areas such as business, mechanics/repair, and precision production in five consortia. Among all students who took articulated courses, tech prep-participants took significantly more semesters, on average, than non-participants.

College Enrollment High Among Participants and Non-Participants

Recognizing that many students selected for this study are labeled non-college bound during their

high school years, the proportion of students in each group that went on to college at the two-year and four-year college levels is astounding. Indeed, the percentage of students attending college at the two-year level was quite high, with over 80% of the tech prep-participants in six consortia and close to that percentage or higher among the non-participant group in five consortia. Enrollment of tech prep-participants exceeded non-participants in seven consortia but the difference between groups was usually small, with a significant difference evident in two sites.

Tech prep-participants showed a slight preference for attending two-year colleges over their non-participant peers but, again, this is not surprising given the focus of articulated course taking that emphasizes sequenced course work extending from high school to community colleges. What seems more interesting is the frequency with which tech prep-participants attended both two-year and four-year colleges and four-year only. Attendance at four-year colleges was particularly evident among tech prep-participants living in localities where higher education options are plentiful, suggesting consortia located in urban or suburban areas with a dense higher education market may benefit from building relationships with a wide range of higher education institutions.

Though the accumulated hours of college credit did not differ for the two groups in most consortia, a difference was revealed in two consortia where tech prep-participants earned more college-level hours than non-participants, and these results held after controlling for differences in the date of high school graduation (1995, 1996, 1997, or 1998.)

College enrollment among tech prep-participants involved fairly substantial continuation of CTE course-taking, suggesting that if students finish a tech program in high school and enroll at the lead college within a few years, they are likely to continue enrollment in a tech prep program at the postsecondary level. Of tech prep-participants who transitioned to the lead college, typically over one-half continued to pursue a tech prep program of study, with participants in one consortium continuing at an astonishing rate of 95%.

College Readiness and Completion Problematic for All Students

Looking at college readiness among tech prep participants and non-participants, from 40% to nearly 80% of tech prep-participants placed into college-level course work overall, with the rest needing to take remedial courses. Non-participants had an even wider range of college-level placement— 30% to 76%. This finding is based on local institutional standards for college placement into career programs, which we referred to as the career standard. Using the transfer standard set by each institution, the vast majority of students (tech prep and non-tech prep) were not "college ready." One consortium was the exception where slightly over half of both student groups were college ready. When students failed a placement test it was usually because they had difficulties with math, and this result was evident for both groups of students (tech prep and non-tech prep).

Overall, completion rates of remedial/developmental and college-level hours were similar, with averages that ranged from about two-thirds to four-fifths from site to site. Differences between participants and non-participants in completion rates were few, with no consistent tendency as to direction.

To date, completion of a college degree (AA, AS, or AAS) or certificate has not been a common occurrence for students in any consortium, regardless of tech prep status. The median percentage of students earning some credential was only 10.5%, three or four years after high school graduation. Indeed, most consortia reported a modest range of completers at 8.5% to 11.7%.

Employment Among All Students is High, Especially Tech Prep Participants

Students who work after high school typically take full-time jobs in relatively unskilled, low-wage jobs. There was evidence, however, that tech prep-participants in some of the consortia were advancing beyond this level of employment, suggesting potential advantages for tech prep-participants in the labor market. A combination of factors may contribute to this phenomenon, including the relevance of tech prep training to semi-skilled or technical employment that is above minimum wage. In addition, more tech prep-participants than non-participants spend time with one employer, moving up from unskilled jobs obtained during high school to semi-skilled jobs after high school graduation. Admittedly speculative, these and other factors may contribute to positive economic outcomes for the tech prep-participants as compared to non-participants. ◆

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Tech prep consortia included in this study are located in:

- San Mateo, California
- Tampa, Florida
- Danville, Illinois
- Greensboro, North Carolina
- Dayton, Ohio
- Mt. Hood, Oregon
- Victoria, Texas
- An anonymous metropolitan site in the Northeast

For additional information on this report, readers can retrieve the full report titled *Transition from High School to College and Work for Tech Prep Participants in Eight Selected Consortia* at the National Centers for Career and Technical Education website:

http://www.nccte.org/publications/index.asp

Student Outcomes Assessment in Tech Prep

by Elisabeth Barnett

Tech Prep has been struggling of late to prove its worth. With reauthorization of the Perkins legislation looming large, there has been extra scrutiny of the initiative and self-searching among Tech Prep's many stakeholders. While practitioners can tell powerful stories of students who have succeeded and systems that have improved through Tech Prep initiatives, many are scrambling to provide clear evidence of success in ways that will be seen as objectively valid.

Assessment of Tech Prep has two important dimensions:

- Analysis of *process* outcomes—based on Tech Prep's status as an education reform initiative. This includes the evaluation of the elements considered key to a Tech Prep model according to Perkins III legislation as well as others identified as central to a high quality initiative.

- Analysis of *student* outcomes—looking at measures of the success of Tech Prep students relative to their peers or selected benchmarks. This generally includes assessment of performance and persistence in high school, transition to college, success in college, and a variety of employment indicators.

Two especially notable national evaluations have been conducted in recent years. Both address aspects of process and student outcomes. Portions of the first, a multi-dimensional four-year study by Debra Bragg, are summarized in the lead article of this newsletter. The other, entitled *Focus for the Future: the Final Report of the National Tech-Prep Evaluation* (1998), was conducted by Mathematica Policy Research and drew on data from 1993 through 1997 (see box on page 7). Both studies pointed out the relative ease of looking at process outcomes, and noted important successes in this realm. However, both emphasized the difficulties encountered when trying to assess the impact of this initiative on students.

The Problem with Student Outcomes Assessment in Tech Prep

Tech Prep is many things to many people, with actual program services differing widely even within a given state. While all Tech Prep consortia are required to address the required elements outlined in the Perkins legislation, this can be accomplished in many ways. Some initiatives are structured as highly defined programs, while others focus on specific activities such as curriculum improvement or work-based learning.

Further, the definition of a Tech Prep student differs widely. Definitions range from "all students," to those signing up for one or more courses, to those who are following a clear education/career plan. There are practical difficulties that emerge from this range of definitions. For one thing, they are very disparate, and when data from students identified under different systems is compiled together, the resulting information is not very meaningful or useful. Second, they include students who may not have had significant program-related experiences, reducing the likelihood that significant outcomes will be found.

Another problem has to do with following a student across systems. High school and college data bases are often unable to "talk" with each other, made more difficult by privacy protection laws and the lack of standard identification systems (e.g., using social security numbers). In fact, many Tech Prep consortia in Illinois are unable to determine whether their high school participants have enrolled in postsecondary education, and most community colleges lack the capability to determine whether their students are former or current Tech Prep participants.

Finally, student outcome data are only meaningful if there is something to compare them to. This can be some form of control/comparison group, or it can be the indicator of goal attainment that a consortium has established. Knowing that 63% of your Tech Prep students completed three years of high school math doesn't mean much by itself.

Creating a System to Assess Student Outcomes

Based on a review of current practices around the country, I believe that a methodology that allows accurate assessment of student outcomes in Tech Prep requires four things:

1) *Documenting student enrollment in Tech Prep on a yearly basis.* Students should be expected to formally enroll in Tech Prep (by this or any other name), and know what activities they have signed up for. A number of states including Massachusetts, Texas, and New York have standardized registration procedures. Enrollment forms are used by some consortia, and are highly recommended. Enrollment forms should include parental or student (over 18) permission for sharing of student information for evaluation purposes within the consortium.

   Some consortia may want to count Tech Prep students separately from Tech Prep participants. Students are those who are following the full sequence of courses and related activities in a Tech Prep career pathway, while participants receive the benefit of certain Tech Prep activities, while not necessarily committing to the full program.

2) *Defining the components of your Tech Prep program.* Unless you are clear on what the Tech Prep program consists of, it is hard to evaluate. Generally a good quality program consists of: courses arranged in career pathways that span at least the 11th through 14th grades, an expectation that high level academic courses will be integrated with (or at least taken along side of) career and technical courses, opportunities for students to develop and refine career plans, access to work-based learning, and assistance in making the transition to postsecondary education.

3) *Deciding on indicators of success.* It is import to be clear on what you consider to be the criteria for good performance for the program. This can be done in two ways. The strongest possible evaluation design uses a control or comparison group, and compares this group's performance with the students in the Tech Prep program. However, this requires expertise and resources, and most programs prefer the alternative: to set targets against which to measure their performance. These should take into account the Perkins indicators, your state's indicators, and items that the consortium is interested in assessing.

Findings of *Focus for the Future: the Final Report of the National Tech-Prep Evaluation* (1998), conducted by Mathematica Policy Research:

Four process-related benefits were highlighted as emerging from Tech Prep initiatives around the country:

- Increased lines of communication, especially among teachers, leading to more collaboration and better articulation.
- Mobilization of interest and resources to improve curriculum through a focus on contextual, real world learning, and problem solving.
- Stimulation of greater interaction between schools and the business community.
- Focusing a spotlight on the need to strengthen math and science skills for vocational students.

The most important suggestions for improvement included:

- Encouraging more highly structured models of Tech Prep, because they show the most promise for student achievement.
- Strengthening preparatory services to enroll more students into Tech Prep programs, help them to stay involved, and assist with the transition to postsecondary education.
- Making sure that consortia are big enough to take advantage of economies of scale, and provide a range of articulation options.
- Reducing barriers to full utilization of articulation agreements by students.

Examples would be:

- Performance—The percent of Tech Prep students who receive C or better in their math classes will increase from 55% to 60% between 2002 and 2004.
- Transition—At least 25% percent of Tech Prep students who graduate from high school will enter postsecondary Tech Prep programs in the same career area in the following year.
- Non-traditional course taking—At least 25% of the students in each Tech Prep program will be of the non-traditional gender during the 2004- 2005 school year.

For more helpful examples, see Sheila Ruhland's manual entitled *Measuring Tech Prep Excellence: A Practitioner's Guide to Evaluation* (p. 29). It can be downloaded at: *http://www.nccte.org/publications/index.asp* (Look under Research and Development Project Reports- 2001).

4) *Data collecting and synthesizing mechanisms.* Finally, you need a feasible way to collect data on students. In Illinois, the ISIS system does this well at the secondary level, as long as the person entering the data is clear about who should be flagged as a "Tech Prep student." Among Illinois community colleges, the A-1 system also allows this data collection—*if* there is a way of identifying students who were high school Tech Prep participants. However, as in many other states, it is difficult for the two systems to connect with each other, a problem that the state is working to resolve. Consortium-level solutions are also possible, especially if forms have been signed permitting information sharing.

Finally, data should be compiled at least yearly and compared with the selected indicators (or control/comparison groups). While it is important to report the results to funders and other stakeholders, the most important use of this information is for *program improvement.* Each consortium's data should be a topic of discussion by its governing body, and plans should be made to celebrate successes and improve areas that are lacking.

In conclusion, it is critical that Tech Prep be able to demonstrate results. Educators risk a loss of credibility if they cannot show that the program makes a difference in students' lives. This requires the ability to 1) identify students who have participated in a full Tech Prep experience, and 2) assess their performance. ◆

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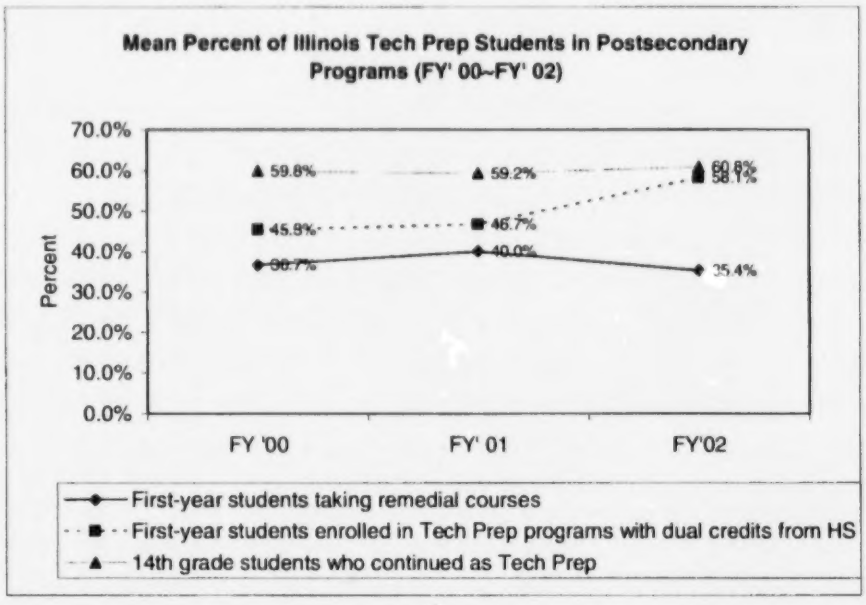
Data from Illinois' Tech Prep Evaluation System (TPES) showing trends in three statewide student outcome indicators during a three year period (OCCRL, 2002).



Considerations in Working with the Dual Credit Student: Social and Legal Issues

by George Johnston and Sharon Kristovich

In 1991, Parkland College was one of the first community colleges in Illinois to begin offering dual credit classes for selected programs. The concept of dual credit was not new: in 1991, the Florida Community College System had nearly 18,000 students receiving both college credit and high school credit for attending the same class (Windham, 1998). However, these approaches were still not well developed at the beginning of the 1990s. Initially at Parkland, there were three area high schools involved in a consortium funded by the Tech Prep initiative. Additional classes with other area high schools have subsequently been offered, and this delivery method for course work is currently one of the fastest growing segments of Parkland's market.

One of the arguments in favor of dual credit was that students would be able to shorten the time necessary to complete a degree. A related argument was that students would be more likely to enroll at the community college upon completion of their dual credit courses. However, a follow-up study was conducted on the initial cohort of dual credit students which was inconclusive in relation to these two goals.

Many difficulties were encountered in the initial attempt at establishing dual credit. Scheduling classes for four different schools posed significant challenges, including problems associated with inclement weather. Some college faculty reported discipline problems. Community college faculty were not used to, nor were they prepared to deal with, student discipline of this type in college-level courses. Other problems arose during those times of inter-school sports rivalry— particularly cross-town football rivalries.

The initial program was canceled in Spring 1993 for several reasons. First, there was no agreed-upon criterion for selecting new students. Second, one of the three original schools had no new students interested in the program. Finally, difficulties were encountered trying to make such a program available to other area high schools that might have an interest in participating. The college and the Regional Office of Education decided to channel Tech Prep funds in other venues.

In 1995, the dual credit program was reinstated at Parkland, and has since operated successfully. The initial course offerings were in auto mechanics, health-related courses were then added, and finally the program included a broad range of career-technical and academic courses. While many students take classes on the Parkland campus, others participate in college-sponsored classes in their home high schools.

Issues Related to Under-aged Students Attending College Classes

In both our earlier and later experiences with this program, we thought it important to fully understand the ramifications of working with younger students. The first set of issues dealt with students attending the college who are under the age of 16. To better understand the legal implications of under-aged students attending the college, Dr. Paul Thurston of University of Illinois at Urbana-Champaign was consulted. Dr. Thurston identified three areas of the law he considered important. The first area concerned the law of negligence and the standards that are applicable to college staff and employees. The second area is the contractual relationship between the college and minors. The third is the potential for student-to-student sexual harassment because of younger students attending.

According to Thurston, the primary rule of law that applies to liability is the "reasonable care" standard — namely that the college has a responsibility to provide a safe and healthy environment for its students. Basically, the application of this reasonable care standard calls for added vigilance on the part of all staff members to insure that the classroom settings and the labs are safe for younger, and in many cases, less physically developed students. There is considerable protection for community colleges and their employees in the Local Governmental and Governmental Employees Tort Immunity Act (745 ILCS 10/1-101, *et. seq.*); but the best advice is to be constantly vigilant about student safety. College policies and instructional policies must ensure that safety measures are in place and that course syllabi and instructor practices call attention to potential dan-

gers for students. Beyond this, insurance provides the best form of protection for injuries that might occur.

The second area of legal concern when dealing with under-aged students is one of the contractual relationships between the college and these students. Thurston called specific attention to the fact that minors are not recognized as able to enter binding contracts until they reach the age of 18 (16 if emancipated). Thurston strongly recommended that agreements be made with parents or guardians speaking for their children. This recommendation has implications for many forms the college requires, including applications.

The third area of legal concern with under-aged students is that of student-to-student sexual harassment. Younger students may be vulnerable to sexual harassment in a community college setting because of the age differential and less sense of responsibility on the part of the community college when compared to its high school counterpart. The standard of liability for the public school district and, presumably, a community college offering dual credit courses, was provided by the US Supreme Court in the 1999 decision, *Davis v. Monroe County Board of Education.* The Court held that the educational institution was liable under Title IX for private damages to a student on student-to-student sexual harassment claim only where the district acted with deliberate indifference to known acts of harassment in its programs or activities. "We [the Supreme Court majority] conclude that funding recipients are properly held liable in damages only where they are deliberately indifferent to sexual harassment, of which they have actual knowledge, that is so severe, pervasive, and objectively offensive that it can be said to deprive the victims of access to the educational opportunities or benefits provided by the school." This is a difficult standard for the injured student to meet. Still, there are powerful personal and educational reasons to be concerned about sexual harassment and to be alert to the educational environment and the potential or real effect that this environment has upon student safety.

An additional very important issue must be taken into consideration when offering dual credit or even home-school credit courses for students. Senior institutions such as the University of Illinois at Urbana-Champaign have very strict limits about how many courses a student can take at the college level and still be considered an entering first-year student. This limit is usually less than one semester or 12-15 semester credit hours. While this may not be a significant issue for students enrolled in vocational classes who have no intention of transferring to a senior institution before completion of an Associate's Degree, it could easily surprise students who are trying to get a "jump start" on college. Parents need to be made explicitly aware of these facts before students are enrolled for credit.

A final issue is the right of privacy and reporting grades between institutions. It is essential that the college report individual grades to the high school where the students are enrolled. It is maintained that this is a legitimate "need to know" and does not violate students' rights to privacy. The college has on file an opinion that the college can share individual students' college placement assessments with the sending high school based on the need to know if sufficient safeguards are in place to protect against undue disclosure. High schools are reporting that such information is very helpful.

Recommendations:

1. Credit-taking students not covered by dual credit agreements must be 16 years or older.
2. Students taking courses not-for-credit must be at least 16 years or older unless accompanied by their parents/guardians.
3. Sports camps whose participants are younger than 16 should require and have on file signed parental agreements.
4. Staff providing instruction to students under age 16 must agree to security background checks.
5. Students taking dual credit or courses designed for the home-schooled should have specific signed parental permission slips that clearly show awareness of potential limits on the numbers of college-level credits the student may take without jeopardizing entering class standings at senior institutions. ◆

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The Illinois Partnership Academy: A Benefit for All

by Linda Denk

Career Academies: A Tech Prep Model

Editor's note. While Career Academies have existed since the early 70s, new research highlights their effectiveness as a model that uses many of the elements of Tech Prep, offering them in a structured school-within-a-school framework. Career Academies have been found to increase attendance and the likelihood of staying in school among students at risk for dropping out (Kemple, 2001), reduce the need for remediation (Orr, Hughes, & Karp, 2002), and improve the chances for college attendance (Pierce, 2001). The following article describes an outstanding Illinois Career Academy providing lessons for educators considering this model in their own settings.

The Hospitality and Tourism Academy (HTA) started in January 1997 and is located at Springfield High School in Springfield, Illinois. It is an Illinois Partnership Academy as well as an example of the school-within-a-school concept. Students from all three of the District #186 high schools are eligible to join the academy. They must apply to the program and are chosen after a review of their grades, attendance history, and test scores. Students are held to the same graduation requirements as any other student in a District #186 college preparatory program, and are always encouraged to continue their education after high school.

The HTA is considered a four-year program; however, a student may enroll in the academy in either the ninth or tenth grade. The career-related classes begin in the freshman year with Introduction to Hospitality and Tourism, which allows students an opportunity to explore their skills and interests. The HTA core courses include English, Social Studies, and Family and Consumer Sciences, and are taught by a team of four teachers who cover the academic and career classes. The academy is an education-to-careers program and strives to meet the varied needs and interests of its students. HTA students also participate in the cooperative education work program as juniors and seniors. Academy classes are limited to 20-25 students.

Students are exposed to a variety of learning opportunities which enable them to develop management and problem solving skills, critical thinking, teamwork, and a good work ethic. The HTA computer lab gives students the opportunity to develop a great number of job skills necessary in the ever-changing business world. In addition, the academy strives to provide students with a variety of learning opportunities through the use of integrated projects. The regular use of computer technology and integrated curriculum enhances the learning process of students with varied learning styles.

An analysis of Springfield's economy provided the career theme for the academy. The fields of hospitality and tourism are the fastest growing career areas in the United States. Springfield is a good reflection of this career bonanza, with potential in the areas of tourism, conventions, travel, recreation, related state and local agencies, hotel/motel management, catering, restaurant management, food service related areas, retail management, sales and marketing. Springfield is uniquely suited because it is the state capitol, has a convention center, and was the hometown of President Lincoln. Further, eating and drinking places comprise the fourth largest employment sector in the Springfield metropolitan area and surrounding counties. Many other historical sites are in the vicinity, which makes it a tourist area for millions of visitors each year. The anticipated openings of the Lincoln Presidential Library and Museum in 2002 and 2004 are expected to expand the labor market.

Dual Credit and Certification

Students attending some of the classes in the academy receive college credit through the articulation program with Lincoln Land Community College. They may earn up to 10 hours of college credit while in the academy, allowing them to save on college time and tuition costs. One area in which college credit can be earned is in "management certification" for food serving businesses.

Illinois State law now requires that any business serving food have a person with management certification for safe food handling and sanitation present whenever the establishment is open. The curriculum needed for the state certification test is covered as part of the Hospitality and Tourism Management class. Students use curriculum materials developed specifically to meet all of the requirements necessary for successful completion of the food safety course. The instructor for the Hospitality and Tourism Management course is a State of Illinois Certified Instructor and the school is a state approved testing site. This program has been in place in the academy for over five years and has seen a high rate of student success. Students frequently say that this certification has been very helpful to them in a variety of work areas. Employers are eager to hire students who have the management certification. Even students who do not work in food related areas have been told that their resumes stand out. Employers feel that this certification puts the high school student above others because it shows that the student has taken the initiative to do something extra.

School Based Enterprise

Another unique segment of the curriculum is a school-based enterprise. As part of the curriculum in the Hospitality and Tourism Management class, the students operate a school store. The store, the *Senator's Express*, is open each day before school. It provides a variety of snacks and drinks, school supplies, school spirit items, and sells balloons for all occasions. The Senator's Express provides hands-on experience in the development and management of a small business. Students learn about advertising and promotion, inventory management, merchandising, teamwork, computer technology, and the financial aspects of running a business. The store provides academy students a visibility within the school that makes them proud to be a part of the HTA, and gives them a controlled setting in which to practice the knowledge and skills covered in class.

Business Partnerships

The academy is very fortunate to have an excellent group of business partners. The HTA Business Partner Advisory Committee includes the following members who participate in every aspect of the academy operation: Crowne Plaza Hotel, Illinois Department of Agriculture, Lincoln Land Community College, Knight's Recreation Park, Flowers LeGrand, Lincoln's Home National Historic Site, McDonald's Corporation, Springfield Hilton, Day's Inn Motel, Illinois State Fair, Traveler's Choice Travel Service, Springfield Convention/Visitors Bureau, Illinois Department of Natural Resources, Illinois Historical Library, The Hotel/Motel Association, Springfield Restaurant Association, and Capital Airport. Students benefit from these partnerships, gaining business insights though one-on-one interaction with business partners and real-world learning opportunities.

The Results

The Hospitality and Tourism Academy has proven to be beneficial to School District #186, to the Springfield community, and above all, to the students. There has been improvement in student achievement and attendance. The academy has provided a link between School District #186 and the community and business world in a way that is unique and positive. Academy graduates have returned to report that what they learned in the academy has been an important part of their success after high school. ◆

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Top 10: The Most Useful Tech Prep Related Web Resources

by JoHyun Kim

The Internet has become a major source of up-to-date information. It enables individuals to access remote knowledge bases at a simple key-stroke. Moreover, these electronic information archives can be easily updated to reflect changes in topics of interest. However, this convenient and vast information source has created one unexpected downside— users of the Internet may get lost in electronic space, find it difficult to judge the quality of the information, and sometimes end up collecting a hodge-podge of information from many different sources. Truly, too much information may be more troubling than a lack of information. When you type the keyword "Tech Prep" on an Internet search site such as Google or Yahoo, you are likely to face astronomical numbers of web resources. Any indication about the quality of the information would be a big time-saver and mind-reliever!

A good many professional organizations utilize the web to disseminate current knowledge about their field. These sites provide both the researchers and the practitioners with good quality and trustworthy information. Working as a Research Associate studying Tech Prep, I spent tons of hours collecting information about the topic. My experiences with this firmly convinced me that the Internet is a mixed blessing. What you find is convenient, current, and readily retrievable. However, finding useful information is time-consuming and oftentimes futile. With this in mind, I present the "Top 10: The most useful Tech Prep related web resources", which have been very informative and usable:

1. **Office of Community College Research and Leadership (OCCRL) Tech Prep webpage**
   http://occrl.ed.uiuc.edu/TPESI/default.asp

This site provides in-depth information regarding the status of Tech Prep in Illinois, one of the most successful states in implementing Tech Prep. Other useful information includes fact sheets, PowerPoint slides, brochures, and technical reports published by OCCRL researchers. The Tech Prep program evaluation materials and protocols on the site are also very useful. These materials can be used as a benchmarking tool in planning and developing Tech Prep program evaluations in schools, districts, and/or consortia.

2. **Introduction to Tech Prep: A Self-Directed Learning Program webpage**
   http://occrl.ed.uiuc.edu/TP/tpt.asp

This self-directed Tech Prep learning program is a great start for new Tech Prep coordinators or other individuals who are eager to learn more about Tech Prep. The contents and instructional materials are from a graduate-level on-line course about Tech Prep that was taught at the University of Illinois at Urbana-Champaign during the spring semester of 2002. The course consists of a series of modules with PowerPoint slides, reading materials (mostly free for downloading), and course assignments.

3. **Illinois State Board of Education Tech Prep webpage**
   http://www.isbe.state.il.us/techprep/

This website provides Illinois' Tech Prep definitions, grant information, and the Tech Prep consortia directory. The site also includes great Tech Prep marketing materials, such as flyers, brochures, posters, booklets, and PowerPoint slides. One very useful item (free download) from the site is the "Tech Prep Directors Handbook". This material is a great resource for Tech Prep administration and implementation.

4. **U. S. Office of Vocational and Adult Education (OVAE) webpage**
   http://www.ed.gov/offices/OVAE/

OVAE is a branch of U.S. Department of Education. Resources on this site are targeted to topical areas such as High Schools, Career and Technical Education, Community Colleges, and Adult Education and Literacy. Tech Prep-related resources include:

- Facts about Tech Prep Programs - ***http://www.ed.gov/offices/OVAE/CTE/techprep.html***

- Tech Prep Data and Statistics - ***http://www.ed.gov/offices/OVAE/CTE/tprepdat.html***
- The Carl D. Perkins Vocational and Technical Education Act - ***http://www.ed.gov/offices/OVAE/CTE/perkins.html***
- Award Winning Tech Prep Programs - ***http://www.ed.gov/offices/OVAE/CTE/parnell.html***

5. Center for Occupation Research and Development (CORD) website
http://www.cord.org/

As a national nonprofit organization, CORD focuses on curriculum development, teacher training, and Tech Prep leadership. It aims to provide innovative changes in education to prepare students for greater success in careers and higher education. Related to this goal, the site presents information on contextual teaching/learning and business-education partnerships, in addition to Tech Prep related materials. Some materials are free and others are available for a moderate cost. One popular free downloadable item is "The ABCs of Tech Prep: A User's Manual" (***http://www.cord.org/Lev2.cfm/86***).

6. National Tech Prep Network (NTPN) website
http://www.cord.org/lev1.cfm/2

Founded by CORD, NTPN is an organization for educators and employers involved in Tech Prep. It provides resources to assist its members with planning, developing, implementing and evaluating Tech Prep. The monthly "Connections" newsletter provides the latest Tech Prep news. Other resources include the state Tech Prep coordinators list, information about the exemplary worksite learning award winners, and reports on exemplary Tech Prep sites.

7. The National Association for Tech Prep Leadership (NATPL) website
http://www.natpl.org/

NATPL aims to encourage career development, professional involvement, and networking among Tech Prep leaders. Its website has a discussion forum that is a good channel for communication with other Tech Prep leaders. The web resource page on the site provides web links to Tech Prep websites in each state. You can learn about other states' Tech Prep efforts by clicking (***http://www.natpl.org/top/links.html***).

8. Tech Prep Texas website
http://www.techpreptexas.org/

As one of the leading states in developing and implementing Tech Prep, Texas maintains an informative and user-friendly Tech Prep website. The site provides information targeted to the needs of different visitors, such as students and parents, high schools and colleges. Visiting here, you will see the state's efforts to expand its Tech Prep program along with the Statewide Articulation Program as major educational reform initiatives.

9. ERIC Clearinghouse on Adult, Career and Vocational Education website
http://www.ericacve.org/

Educational Resources Information Center (ERIC) is probably the world's largest information source for educators. This electronic database system is large and includes journals, articles, and technical reports. If you type 'Tech Prep' in the little box in the search page, you will get to almost 1000 articles related to Tech Prep. For example, you can obtain the full text of "*Tech Prep Implementation in the United States: Promising Trends and Lingering Challenges*" by Bragg et al (1994) and "*Focus for the Future. The Final Report of the National Tech-Prep Evaluation*" by Hershey et al (1998) through the ERIC database for free (the ERIC number for Hershey et al is 'ED423395' and for Bragg et al is 'ED374336'). These two papers effectively illustrate the status of Tech Prep implementation in the United States.

10. National Center for Career and Technical Education (NCCTE) (formerly NCRVE) website
http://www.nccte.com/

NCCTE has conducted projects and published numerous papers related to Career Technical Education including Tech Prep. Typing in "Tech Prep" as a search keyword will direct you to numerous published papers and other resources on this topic. ◆

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A Position Statement Regarding Reauthorization of the Carl D. Perkins Act for Tech Prep

by Dick Arndt

As Immediate Past President of the National Association for Tech Prep Leadership (NATPL), the only national organization representing Tech Prep Leaders, I have had the opportunity to meet with and discuss Perkins funding with many Tech Prep leaders throughout the United States. NATPL has in excess of 350 members from 50 states including 44 state Tech Prep directors. NATPL represents its members and disseminates research after consultation among its Board of Directors and Leadership Team. As a key leader of NATPL, it has been important to merge ideas and concerns from a wide variety of sources.

The Carl D. Perkins Act, Perkins IV, will be debated in Congress during 2003, taking into account recommendations from the Office of Vocational and Adult Education (OVAE). Tech Prep Leadership has been invited to provide only minimal input to either OVAE or Congress. As we move ever nearer to a Perkins discussion and decision, it is imperative that we be afforded the opportunity to speak and be heard.

Tech Prep or, more appropriately, College Tech Prep, has proven to be an educational initiative that works. While the CAR (Consolidated Annual Report to OVAE) report fails to note the success of Tech Prep, NATPL and its members have amassed results from both state and national research that demonstrate the positive effects of Tech Prep on teaching and learning of students and systemic change in schools and districts. Data tracking within CAR fails to recognize Tech Prep's contributions to the "middle 60%" of high school students, the old general education track. Tech Prep is providing significantly improved academic and technical preparation to students who in the past would either have enrolled in college and "dropped out," or would not have started college due to lack of preparedness. Through contextual learning, increased awareness of the importance of education, and the potential for future employment, Tech Prep students are more successful in their postsecondary endeavors than non-Tech Prep students.

Lack of preparation by secondary students has proven most costly. For example, a recent Ohio report showed that the state spent $15 million reteaching 260,000 credit hours of remedial and developmental courses to 20,000 students in 2000. The students paid an additional $15,000,000 for courses that did not count toward graduation. Each year, approximately 38% of Ohio's freshman entering public postsecondary education need remedial or developmental courses. At the same time Tech Prep graduates have demonstrated lower need for remedial coursework. Sinclair Community College in Dayton, Ohio conducted a three-year study which found that Tech Prep students needed 17% less math remediation and 25% less English remediation than non-Tech Prep entering freshmen. These results have been borne out by studies in several other states. Nationally Tech Prep is, at its worst, "a no cost program," generating savings in excess of investments made by both the federal and state governments.

Based on economic conditions and the publicly perceived quality of education, Tech Prep is a foundation for systemic educational reform. Education certainly fuels America's economic engine and Tech Prep has proven to be very efficient as an educational driver. Tech Prep prepares students for further education and for ever-changing career patterns. Students learn to be lifelong learners and able to adjust to new and rapidly changing business needs.

Based on fact, not opinion or public perception, Tech Prep deserves to be continued as a funded initiative under a reauthorized Carl D. Perkins IV. NATPL has fully supported continuation of Perkins funding for career and technical education at appropriate levels, but firmly believes that maintenance of a separate and financially adequate funding stream is necessary to sustain current Tech Prep initiatives on national, state, and local levels. Present and uncertain funding mechanisms for Tech Prep marginalize the program and serve as a barrier to future growth.

Funding should be provided to states that have adopted and adhere to appropriate definitions for Tech Prep students, concentrators, and completers to enable more accurate and consistent Tech Prep data. While definitions vary among states, NATPL has promoted and provided to OVAE definitions that cut across individual states' definitions. We strongly encourage OVAE to adopt the NATPL definitions and to create appropriate accountability measures based on these definitions. ◆

Dick Arndt is Director of K-16 Initiatives of the Ohio Board of Regents and Past President of the National Association for Tech Prep Leadership. He may be contacted at darndt@regents.state.oh.us.

Book Review: The Dual-Credit Phenomenon! Challenging Secondary School Students Across 50 States

by Doug Gardner

Dr. Andrews' recent publication on dual-credit defines terms and surveys what individual states are doing to advance the growing phenomenon of dual-credit and dual-enrollment. Andrews describes the justifications for adopting a dual-credit program and provides guidance for developing these programs.

The author, **Hans A. Andrews,** recently retired as president of Olney Central College in Southern Illinois. His professional experience includes a number of positions at various community colleges in an array of leadership roles. Andrews has established himself as a researcher, writer, and consultant in the area of faculty evaluation and was an early and enthusiastic proponent of dual-credit programs.

Andrews' book is divided into chapters, each highlighting an important dimension of this issue. A description of each major theme follows.

Justification for Dual-Credit/Enrollment

Why dual-credit? Dual-credit is the answer to the call for a seamless transition from high school to college. For many students, the senior year of high school is seen as a reprieve from work or thinking. Many high school seniors attest to the fact that their senior year is a waste of time. Studies show that during the senior year of high school students often experience a decrease in motivation. Higher education and secondary education are not seen as working together in their efforts to address this situation. Responses to these same concerns over the years have included honors and AP classes. Dual-credit is not new; it has existed in a few areas for nearly twenty-five years. The most significant growth in dual-credit has been in the community colleges.

Dual Credit Models

Andrews identifies several dual-credit models: 1) students receive college credit for courses they take at the high school, 2) community college teachers teach at the high school, 3) college courses are taught at a location other than the high school and limited to high school students, and 4) college courses are taught at a location other than the high school and include high school and college students. Many new models are also being developed and new ways of incorporating dual-credit/enrollment models are being tested. This phenomenon continues to evolve.

Andrews outlines what is happening throughout the country in various states, colleges, and secondary schools in their efforts to adopt dual-credit and dual-enrollment programs. Chapters II, III, and IV review various dual-credit programs. Evolving state plans and policies are identified, as well as program models in effect on college and high school campuses.

State Plans

This section reviews emerging state plans to adopt dual-credit legislation. States have only recently begun to formally organize dual-credit/enrollment programs at the state level. Several states have already pushed programs through the state legislature while others are still gathering support. A national organization, *The National Alliance of Concurrent Enrollment Partnerships* (NACEP), has been formed to link people from colleges with those in high schools in an effort to establish initiatives and standards for the dual-credit/enrollment movement.

The next two sections differentiate dual-credit and concurrent enrollment programs that are developed as: 1) those programs offered at both the college campus and at secondary schools, and 2) those being offered only at a college campus.

State Plans: College Campus and High School Campus Options

Providing the option for high school students to attend dual-credit classes at either the high school or the college certainly enhances accessibility for students. However, quality issues arise when college courses are taught on the high school campus. Several states have instituted policies that require high standards for those who teach the college credit courses. Teachers are expected to have the same credentials as those required of college faculty as well as use college textbooks and syllabi.

State Plans: College Campus Programs

This section highlights various state policies applying to dual-credit instruction on college campuses. Some states do not allow dual-credit/enrollment classes to be offered on the high school campus; thus quality issues related to faculty credentials do not become an issue. The drawback to this model is that student access may be limited because they must travel to the college campus to take classes.

Outcomes of Dual-Credit for Students

At a preliminary level, dual-credit programs have been studied and positive outcomes have been identified. One study conducted in Oregon identified eight outcomes for dual-credit programs: 1) acceleration of progress for students, 2) reduced tuition cost, 3) reassurance for parents concerning their child's ability to handle college-level academic responsibilities, 4) relief of high school boredom, 5) productive interaction between secondary and postsecondary education, 6) facilitated student recruitment, 7) positive college and community relationships, and 8) opportunities to address equity concerns.

The author identifies outcomes that directly benefit students: 1) enrolling in college level classes while still in high school, 2) gaining marketable skills while still in high school, and 3) opportunities to earn up to one semester or even two years of college credit before or immediately following high school graduation.

Andrews further notes four positive outcomes identified in studies of dual-credit programs. First, secondary schools, community colleges, and universities are working together and providing college-level courses for students who are ready for early entry into college work. Second, students are leaving high school with one-semester or one-year of college work completed; others are completing an Associate's Degree by the end of their high school years. Third, there has been very little difficulty in transferring college dual-credit courses to higher education institutions. And fourth, students in follow-up studies have reported that the courses have been as challenging as or more challenging than courses subsequently taken at the university.

Dual Credit: Local, State, and National Research Needs

The number of studies being conducted on the positive and negative aspects of dual-credit continues to grow. The current need is for states to "document the success and impact of dual-credit programs on their students," and to take note of the accomplishments of students who enroll in dual-credit programs. Additionally, shortcomings of dual-credit programs need to be identified so that continuous improvements may be made. The quality of dual-credit programs is the major concern related to their growth.

Thoughts

This book provides an excellent springboard for learning what is happening throughout the states with the growth of dual-credit. Andrews mentions the fact that many descriptions in this book may be out-of-date by its printing because ideas and policy surrounding dual-credit/enrollment are evolving so fast. There is a clear need for approaches like dual-credit. As a former high school teacher, I have seen the need for programs that help to keep students engaged in learning as they transition to postsecondary education. Now, as a part of the research community I see within this book several starting points for research into assessment, quality, and policy. This book provides a preliminary agenda for implementing programs and conducting needed research to assess the dual-credit phenomenon. ◆

Book reviewed: Andrews, H.A., *The dual-credit phenomenon: Challenging secondary students across 50 states*. Stillwater, OK: New Forums Press.

Doug Gardner is a Ph.D. student in Education Organization and Leadership in the Higher Education Program at the University of Illinois at Urbana-Champaign and a former high school teacher. He may be reached at ***dsgardnr@uiuc.edu****.*

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The contents of this newsletter do not necessarily represent the positions or policies of OCCRL personnel or the Illinois State Board of Education.

See OCCRL's website at *http://occrl.ed. uiuc.edu* for previous issues and other resources.

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